



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,145	03/16/2004	Hidetaka Mizumaki	70404.21	2169

54072 7590 03/13/2007
SHARP KABUSHIKI KAISHA
C/O KEATING & BENNETT, LLP
8180 GREENSBORO DRIVE
SUITE 850
MCLEAN, VA 22102

EXAMINER

GUILL, RUSSELL L

ART UNIT	PAPER NUMBER
----------	--------------

2123

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	10/801,145		MIZUMAKI, HIDETAKA	
	Examiner		Art Unit	
	Russ Guill		2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/16/2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 - 25 have been examined. Claims 1 - 25 have been rejected.

Claim Objections

2. Claims 1, 17, 20 and 22 - 25 are objected to because of the following informalities:
The acronym "IC" is used, but is not defined in the claim. The full meaning (integrated circuit) should be recited, followed with the acronym in parentheses (IC). Appropriate correction is required.
3. Claims 22 - 23 are objected to because of the following informalities: The preamble does not have a transitional phrase that conforms to standard format (e.g., comprising, consisting of).
4. Claims 19, 21 and 24 - 25 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- a. Claims 1 - 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- i. Regarding claim 1, the claim recites, "getting the new IC designed by a user". It is unclear whether the intention is to receive a designed IC, or rather, to design a new IC. For the purpose of claim examination, the phrase is interpreted as, "designing the new IC by a user". Correction or amendment is required.
- ii. Regarding claim 1, the claims recite, "getting the new IC evaluated by the manager". It is unclear whether the intention is to receive a new IC that was evaluated by the manager, or rather, to evaluate the new IC by the manager. For the purpose of claim examination, the phrase is interpreted as, "evaluating the new IC by the manager ". Correction or amendment is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. **Claims 17 - 25** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

- a. Regarding claim 17 and dependent claims, the claim is directed toward a manager for managing IC designing information. The recited manager appears to contain software, which is an abstract idea. Therefore, to be statutory, the claim must be directed to a practical application producing a concrete, useful and

tangible result. The claim does not appear to necessarily always produce a tangible result needed to support a practical application.

b. Regarding claims 17 - 21, the claims are directed to a design terminal and a manager. The specification appears to recite that the design terminal and manager may be entirely software (paragraph [0080], first sentence; and paragraph [0058]). Therefore, the claims may be interpreted as being entirely software, which is functional material *per se*, and the claims are non-statutory. A claim that can be interpreted to be either statutory or non-statutory must be amended to include only statutory interpretations.

c. Regarding claim 19, the claim is directed to a manager, which appears to be software. Therefore, to be statutory, the claim must be directed to a practical application producing a concrete, useful and tangible result. The claim does not appear to produce a tangible result needed to support a practical application.

d. Regarding claim 21, the claim is directed to a design terminal, which appears to be software. Therefore, to be statutory, the claim must be directed to a practical application producing a concrete, useful and tangible result. The claim does not appear to produce a tangible result needed to support a practical application.

e. Regarding claims 22 and 23, the claims are directed to a program product. A program product can be interpreted as being entirely source code, which is non-functional descriptive material *per se*, and is therefore non-statutory.

f. Regarding claim 22, the claim is directed toward a program product for managing IC design information. The recited program product appears to contain software, which appears to be an abstract idea. Therefore, to be statutory, the claim must be directed to a practical application producing a

concrete, useful and tangible result. The claim does not appear to necessarily always produce a tangible result needed to support a practical application.

g. Regarding claim 24, the claim is directed toward an IC designing system. The recited IC designing system appears to be entirely software, which is functional material *per se*, and is therefore non-statutory.

h. Regarding claim 24, the claim is directed toward an IC designing system. The recited IC designing system appears to contain software. Therefore, to be statutory, the claim must be directed to a practical application producing a concrete, useful and tangible result. The claim does not appear to produce a tangible result needed to support a practical application.

i. Regarding claim 25, the claim is directed toward an IC designing system. The recited IC designing system appears to be entirely software, which is functional material *per se*, and is therefore non-statutory.

j. Regarding claim 25, the claim is directed toward an IC designing system. The recited IC designing system appears to contain software. Therefore, to be statutory, the claim must be directed to a practical application producing a concrete, useful and tangible result. The claim does not appear to produce a tangible result needed to support a practical application.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 2123

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 1 - 14 and 17 - 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (U.S. Patent Application Publication 2003/0009730) in view of Dole (U.S. Patent Number 6,634,008), further in view of Haase (Jurgen Haase; "Design Methodology for IP Providers", 1999, Design, Automation and Test in Europe, five unnumbered pages).

- a. The art of Chen is directed to an electronic automation design system (Abstract).
- b. The art of Dole is directed to an electronic automation design system (Abstract).
- c. The art of Haase is directed to a design methodology for intellectual property (IP) providers (Title and Abstract).
- d. The art of Chen and the art of Dole are analogous art because they both contain the art of electronic automation design.
- e. The art of Chen and the art of Haase are analogous art because they both pertain to the art of using intellectual property packages (Chen, figure 2, element 206; and Haase, first page).
- f. Regarding claim 1:
- g. Chen appears to teach:
- h. A method for designing a new IC based on IC designing information, the IC designing information including standard library designing information and custom library designing information and being stored (figure 20, elements 2002, 2006; and figure 2, elements 204, 270, 220, 208; it would have been obvious that parts 220 were standard library information, and SOC Designs 208 were custom library designing information).

- i. a portion of the standard library designing information (figure 2, element 220; it would have been obvious that parts were standard library designing information);
- j. (b) getting the new IC designed by a user located at the design terminal in accordance with the at least part of the IC designing information (Abstract and figure 2; it would have been obvious that an IC was designed on a design terminal);
- k. new IC testing information to evaluate the new IC (paragraph 40, last sentence; it would have been obvious that a new IC had testing information, for example refer to Haase below);
- l. (d) getting the new IC evaluated by a manager based on the newly designed IC information (paragraph 40, last sentence; it would have been obvious that the new IC was evaluated by testing using the EDA software, which is a manager);
- m. (e) adding at least part of the newly designed IC information to the custom library designing information that is stored, thereby updating the custom library designing information (figure 2, element 208; it would be obvious that SOC designs were custom library information that were stored and updated).
- n. Chen does not specifically teach (in **bold italic underline**):
- o. A method for designing a new IC based on IC designing information **transmitted from a manager**, the IC designing information including standard library designing information and custom library designing information and being stored **in, and managed by, the manager**.
- p. (a) **transmitting at least part of the IC designing information**, including a portion of the standard library designing information, **from the manager to a design terminal through the Internet**;
- q. (c) **transmitting newly designed IC information**, including new IC testing information to evaluate the new IC, **from the design terminal to the manager through the Internet**;

R. (d) getting the new IC evaluated by the manager based on the newly designed IC information; and

S. (e) adding at least part of the newly designed IC information to the custom library designing information that is stored in the manager, thereby updating the custom library designing information.

t. Dole appears to teach:

U. ~~A method for designing a new IC based on~~ IC designing information transmitted from a manager, the IC designing information ~~including standard library designing information and custom library designing information and~~ being stored in, and managed by, the manager (figure 3, figure 4, and column 7, lines 35 - 45; it would have been obvious that design information on a server was transmitted by a manager, since the server and its software are a manager);

V. (b) getting the new IC designed by a user located at the design terminal in accordance with the at least part of the IC designing information (figure 2 and figure 3; it would have been obvious that a user designed a new IC at the design terminal);

W. transmitting at least part of the IC designing information, ~~including a portion of the standard library designing information, from~~ the manager to a design terminal through the Internet (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48; it would have been obvious that design information on a server was transmitted using the Internet, wherein a server and its software are a manager);

X. transmitting newly designed IC information, ~~including new IC testing information to evaluate the new IC, from the design terminal to the~~ manager through the Internet (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48; it would have been obvious that design information on a workstation was transmitted to a server using the Internet, wherein a server and its software are a manager);

y. Haase appears to teach:

Z. (d) getting the new IC evaluated by a manager based on the newly designed IC information (third and fourth pages, section 2.4 Verification, especially automatic verification and running full tests without any user interaction; and fourth page, figure 2, automatic self-checking verification);

aa. It would have been obvious to the ordinary artisan at the time of invention to have both the standard library designing information and the custom library information of Chen on the server (manager) of Dole.

bb. It would have been obvious to the ordinary artisan at the time of invention to have the automatic verification of Haase installed in the server (manager) of Dole.

cc. The motivation to use the art of Haase with the art of Chen would have been the benefits recited in Haase that the benefits of reusing IP is solving a key problem of verification (second page, section 2.1, first paragraph and first bullet item). The ordinary artisan would have recognized solving the verification problem as a benefit to save time. However, at a higher level, another motivation to use the art of Haase with the art of Chen would have simply been the automated verification of running full tests without any user interaction, described in section 2.4, which would have been recognized by the ordinary artisan as a benefit to save time.

dd. The motivation to use the art of Dole with the art of Chen would have been the benefit that storing files and libraries in one location allows for a systematic approach to access and maintainability of design related information (column 7, lines 40 – 45), which would have been recognized as a benefit by the ordinary artisan to save time and expense. However, at a higher level, another motivation to use the art of Dole with the art of Chen would have simply been the benefits provided by the invention of providing a system for distributed design of

integrated circuits (entire patent), which would have been recognized by the ordinary artisan as a benefit to save time and expense in designing an integrated circuit.

ee. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Dole and the art of Haase with the art of Chen to produce the claimed invention.

ff. Regarding claim 2:

gg. Chen appears to teach:

hh. wherein the step (c) includes the step of transmitting new IC connection information, and wherein the step (e) includes the step of adding the new IC connection information as custom library connection information to the custom library designing information (figure 2, element 214, physical pin; and figure 12a, elements 1214a, 1216).

ii. Regarding claim 3:

jj. Chen does not specifically teach:

kk. making new IC evaluation information based on a result of the evaluation;

ll. adding the new IC evaluation information to the newly designed IC information, wherein the step (e) includes the step of adding the new IC evaluation information as custom library evaluation information to the custom library designing information.

mm. Dole appears to teach:

nn. adding the new IC evaluation information to the newly designed IC information, wherein the step (e) includes the step of adding the new IC evaluation information as custom library evaluation information to the custom library designing information (figure 2, Internet connected

to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48).

oo. Haase appears to teach:

pp. making new IC evaluation information based on a result of the evaluation (third and fourth pages, section 2.4 Verification, especially automatic verification and running full tests without any user interaction; and fourth page, figure 2, automatic self-checking verification);

qq. Regarding **claim 4**:

rr. Chen does not specifically teach:

ss. wherein the step (a) includes the step of transmitting at least a portion of the custom library designing information as the at least part of the IC designing information.

tt. Dole appears to teach:

uu. wherein the step (a) includes the step of transmitting at least a portion of the custom library designing information as the at least part of the IC designing information (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48).

vv. Regarding **claim 5**:

ww. Chen does not specifically teach:

xx. wherein the step (a) includes the step of transmitting the custom library connection information as the at least part of the IC designing information.

yy. Dole appears to teach:

ZZ. wherein the step (a) includes the step of transmitting the custom library connection information as the at least part of the IC designing information (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48; since connection information is taught in Chen (figure 2, element 214), it would have been obvious that the connection information was transmitted).

aaa. Regarding claim 6:

bbb. Chen does not specifically teach:

ccc. wherein the step (a) includes the step of transmitting the custom library evaluation information as the at least part of the IC designing information.

ddd. Dole appears to teach:

eee. wherein the step (a) includes the step of transmitting the custom library evaluation information as the at least part of the IC designing information (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48; since Chen teaches design evaluation information, it would have been obvious that it was transmitted to the server).

fff. Regarding claim 7:

ggg. Chen appears to teach:

hhh. wherein the step (e) includes the step of adding the new IC testing information as custom library testing information to the custom library designing information (paragraph 40, last sentence; it would have been obvious that a new IC had testing information, for example refer to Haase);

iii. Chen does not specifically teach:

Art Unit: 2123

jjj. wherein the step (a) includes the step of transmitting the custom library testing information as the at least part of the IC designing information.

kkk. Dole appears to teach:

lll. wherein the step (a) includes the step of transmitting the custom library testing information as the at least part of the IC designing information (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48).

mmm. Regarding claim 8:

nnn. Chen does not specifically teach:

ooo. wherein the step (a) includes the steps of: making the manager determine whether or not the given design terminal belongs among authorized design terminals and/or whether or not the given user belongs among authorized users; and

ppp. transmitting the custom library designing information as the at least part of the IC designing information to the design terminal provided that the given design terminal is identified as one of the authorized design terminals and/or that the given user is identified as one of the authorized users.

qqq. Dole appears to teach:

rrr. wherein the step (a) includes the steps of: making the manager determine whether or not the given design terminal belongs among authorized design terminals and/or whether or not the given user belongs among authorized users (figure 2, Internet connected to servers; and figure 3; and column 7, lines 35 - 45; and column 6, lines 44 - 48; it would have been obvious that a server authenticates potential users);

sss. transmitting the custom library designing information as the at least part of the IC designing information to the design terminal provided that the given design terminal is identified as one of the authorized design terminals and/or that the given user is identified as

Art Unit: 2123

one of the authorized users (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48; it would have been obvious that a server authenticates potential users).

ttt. Regarding claim 9:

uuu. Chen does not specifically teach:

vvv. wherein the step of making the manager determine includes the step of identifying the given design terminal by an electronic authentication number that is uniquely given to each authorized design terminal.

www. Dole appears to teach:

xxx. wherein the step of making the manager determine includes the step of identifying the given design terminal by an electronic authentication number that is uniquely given to each authorized design terminal (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48; it would have been obvious that a server uses a uniquely assigned number from a network manager to uniquely identify each terminal).

yyy. Regarding claim 10:

zzz. Chen does not specifically teach:

aaaa. wherein the step of making the manager determine includes the step of identifying the given user by an ID and/or a PIN that are/is uniquely given to each authorized user.

bbbb. Dole appears to teach:

cccc. wherein the step of making the manager determine includes the step of identifying the given user by an ID and/or a PIN that are/is uniquely given to each authorized user (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines

44 - 48; it would have been obvious that a user needs a unique ID to use the network).

dddd. Regarding claim 11:

eeee. Chen does not specifically teach:

ffff. wherein the step of transmitting the custom library designing information includes the step of narrowing the authorized users to a minimum range.

gggg. Dole appears to teach:

hhhh. wherein the step of transmitting the custom library designing information includes the step of narrowing the authorized users to a minimum range (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48; it would have been obvious that only an authorized user is allowed, which is a minimum range).

iiii. Regarding claim 12:

jjjj. Chen does not specifically teach:

kkkk. wherein if the manager has found the user not belonging among the authorized users, then the step (a) includes the step of transmitting the at least part of the IC designing information not including the custom library designing information at all.

llll. Dole appears to teach:

mmmm. wherein if the manager has found the user not belonging among the authorized users, then the step (a) includes the step of transmitting the at least part of the IC designing information not including the custom library designing information at all (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48; it would have been obvious that for an unauthorized user, the design would not be transmitted).

nnnn. Regarding **claim 13**:

oooo. Chen does not specifically teach:

pppp. wherein if the manager has found the user not belonging among the authorized users, then the step (a) includes the step of transmitting the at least part of the IC designing information not including at least a portion of the custom library designing information.

qqqq. Dole appears to teach:

rrrr. wherein if the manager has found the user not belonging among the authorized users, then the step (a) includes the step of transmitting the at least part of the IC designing information not including at least a portion of the custom library designing information (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48; it would have been obvious that for an unauthorized user, the design would not be transmitted).

ssss. Regarding **claim 14**:

tttt. Chen does not specifically teach:

uuuu. wherein if the manager has found the user not belonging among the authorized users, then the step (a) includes the step of transmitting the at least part of the IC designing information including the at least a portion of the custom library designing information.

vvvv. Dole appears to teach:

www. wherein if the manager has found the user not belonging among the authorized users, then the step (a) includes the step of transmitting the at least part of the IC designing information including the at least a portion of the custom library designing information (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48; it would have

been obvious that for an authenticated user, the design would be transmitted).

xxxx. Regarding claim 17:

yyyy. Chen appears to teach:

ZZZZ. standard library storing means for storing standard library designing information (figure 2, element 220; it would have been obvious that parts were standard library designing information);

aaaaa. the at least part of the IC designing information including at least a portion of the standard library designing information that has been read out from the standard library storing means (figure 2, element 220), the newly designed IC information including new IC testing information to evaluate the new IC (paragraph 40, last sentence);

bbbbbb. Chen does not specifically teach (in **bold italic underline**):

CCCCC. communication processing means for transmitting at least part of the IC designing information to a design terminal, which designs a new IC, through the Internet and receiving design information about the new IC from the design terminal through the Internet, the at least part of the IC designing information including at least a portion of the standard library designing information that has been read out from the standard library storing means, the newly designed IC information including new IC testing information to evaluate the new IC;

ddddd. library evaluating means for evaluating the new IC according to the newly designed IC information that has been transmitted from the communication processing means;

EEEE. custom library storing means for storing custom library designing information and for receiving the newly designed IC information from the communication processing means and adding the newly designed IC information to the custom library designing information, thereby updating the custom library designing information;

fffff. managing means for managing the custom library designing information and for determining whether or not at least a portion of the custom library designing information stored in the custom library storing means should be transmitted to the design terminal, wherein if the managing means has decided that the at least the portion of the custom library designing information should be transmitted to the design terminal, then the managing means adds the at least the portion of the custom library designing information to the at least part of the IC designing information by providing the at least the portion of the custom library designing information for the communication processing means.

ggggg. Dole appears to teach:

hhhhh. communication processing means for transmitting at least part of the IC designing information to a design terminal, which designs a new IC, through the Internet and receiving design information about the new IC from the design terminal through the Internet (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48), the at least part of the IC designing information including at least a portion of the standard library designing information that has been read out from the standard library storing means, the newly designed IC information including new IC testing information to evaluate the new IC;

iiiiii. custom library storing means for storing custom library designing information and for receiving the newly designed IC information from the communication processing means and adding the newly designed IC information to the custom library designing information, thereby updating the custom library designing information (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48);

jjjjj. managing means for managing the custom library designing information and for determining whether or not at least a portion of the custom library designing information stored in the custom library storing means should be transmitted to the design terminal, wherein if the managing means has decided that the at least the portion of the custom

library designing information should be transmitted to the design terminal, then the managing means adds the at least the portion of the custom library designing information to the at least part of the IC designing information by providing the at least the portion of the custom library designing information for the communication processing means (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48).

kkkkk. Haase appears to teach:

lllll. library evaluating means for evaluating the new IC according to the newly designed IC information that has been transmitted from the communication processing means (third and fourth pages, section 2.4 Verification, especially automatic verification and running full tests without any user interaction; and fourth page figure 2, automatic self-checking verification);

mmmmm. Regarding claim 18:

nnnnn. Chen does not specifically teach:

OOOOO. The manager of claim 17, wherein the communication processing means receives a request for the custom library designing information from the design terminal over the Internet and forwards the request to the managing means, and wherein on receiving the request every time, the managing means determines whether or not at least a portion of the custom library designing information stored in the custom library storing means should be transmitted to the design terminal.

ppppp. Dole appears to teach:

qqqqq. wherein the communication processing means receives a request for the custom library designing information from the design terminal over the Internet and forwards the request to the managing means, and wherein on receiving the request every time, the managing means determines whether or not at least a portion of the custom

library designing information stored in the custom library storing means should be transmitted to the design terminal (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48).

rrrrr. Regarding claim 19:

sssss. Chen does not specifically teach:

ttttt. A manager for use in the method of claim 1.

uuuuu. Dole appears to teach:

VVVVV. A manager for use in the method of claim 1 (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48; it would have been obvious that the server contained a manager).

wwwww. Regarding claim 20:

xxxxx. Chen appears to teach:

yyyyy. IC designing means for designing the new IC in accordance with the at least part of the IC designing information (figure 2);

ZZZZZ. including new IC testing information to evaluate the new IC that has been designed by the IC designing means (paragraph 40, last sentence);

aaaaa. Chen does not specifically teach (in ***bold italic underline***)

bbbbb. means for receiving at least part of the IC designing information from the manager through the Internet ;

CCCCC. means for transmitting newly designed IC information, including new IC testing information to evaluate the new IC that has been designed by the IC designing means, ***to the manager through the Internet, wherein the newly designed IC information that has been***

transmitted to the manager is added to the custom library designing information that is stored in the manager.

dddddd. Dole appears to teach:

eeeeee. means for receiving at least part of the IC designing information from the manager through the Internet (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48);

ffffff. means for transmitting newly designed IC information, including new IC testing information to evaluate the new IC that has been designed by the IC designing means, to the manager through the Internet, wherein the newly designed IC information that has been transmitted to the manager is added to the custom library designing information that is stored in the manager (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48).

gggggg. Haase appears to teach:

hhhhhh. new IC testing information to evaluate the new IC that has been designed by the IC designing means (third and fourth pages, section 2.4 Verification, especially automatic verification and running full tests without any user interaction; and fourth page, figure 2, automatic self-checking verification).

iiiiii. Regarding claim 21:

jjjjjj. Chen does not specifically teach:

kkkkkk. A design terminal for use in the method of claim 1.

llllll. Dole appears to teach:

mmmmmm. A design terminal for use in the method of claim 1 (figure 2).

nnnnnn. Regarding claim 22:

oooooo. Chen appears to teach:

pppppp. standard library storing means for storing standard library designing information (figure 2, element 220; it would have been obvious that parts were standard library designing information);

qqqqqq. Chen does not specifically teach:

rrrrrr. communication processing means for transmitting at least part of the IC designing information to a design terminal, which designs a new IC, through the Internet and receiving design information about the new IC from the design terminal through the Internet, the at least part of the IC designing information including at least a portion of the standard library designing information that has been read out from the standard library storing means, the newly designed IC information including new IC testing information to evaluate the new IC;

ssssss. library evaluating means for evaluating the new IC according to the newly designed IC information that has been received at the communication processing means;

tttttt. custom library storing means for storing custom library designing information and for receiving the newly designed IC information from the communication processing means and adding the newly designed IC information to the custom library designing information, thereby updating the custom library designing information;

uuuuuu. managing means for managing the custom library designing information and for determining whether or not at least a portion of the custom library designing information stored in the custom library storing means should be transmitted to the design terminal, wherein if the managing means has decided that the at least the portion of the custom library designing information should be transmitted to the design terminal, then the managing means adds the at least the portion of the custom library designing information to the at least part of the IC designing information by providing the at least the portion of the

custom library designing information for the communication processing means.

vvvvvv. Dole appears to teach:

WWWWWW. communication processing means for transmitting at least part of the IC designing information to a design terminal, which designs a new IC, through the Internet and receiving design information about the new IC from the design terminal through the Internet, the at least part of the IC designing information including at least a portion of the standard library designing information that has been read out from the standard library storing means, the newly designed IC information including new IC testing information to evaluate the new IC (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48);

XXXXXX. custom library storing means for storing custom library designing information and for receiving the newly designed IC information from the communication processing means and adding the newly designed IC information to the custom library designing information, thereby updating the custom library designing information (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48);

yyyyyy. managing means for managing the custom library designing information and for determining whether or not at least a portion of the custom library designing information stored in the custom library storing means should be transmitted to the design terminal, wherein if the managing means has decided that the at least the portion of the custom library designing information should be transmitted to the design terminal, then the managing means adds the at least the portion of the custom library designing information to the at least part of the IC designing information by providing the at least the portion of the custom library designing information for the communication processing means (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48).

zzzzzz. Haase appears to teach:

aaaaaaa. library evaluating means for evaluating the new IC according to the newly designed IC information that has been received at the communication processing means (third and fourth pages, section 2.4 Verification, especially automatic verification and running full tests without any user interaction; and fourth page, figure 2, automatic self-checking verification);

bbbbbbb. Regarding claim 23:

ccccccc. Chen appears to teach:

ddddddd. IC designing means for designing the new IC in accordance with the at least part of the IC designing information (figure 2);

eeeeeee. Chen does not specifically teach:

ffffff. means for receiving at least part of the IC designing information from the manager through the Internet;

ggggggg. means for transmitting newly designed IC information, including new IC testing information to evaluate the new IC that has been designed by the IC designing means, to the manager through the Internet, wherein the newly designed IC information that has been transmitted to the manager is added to the custom library designing information that is stored in the manager.

hhhhhhh. Dole appears to teach:

iiiiiii. means for receiving at least part of the IC designing information from the manager through the Internet (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48);

jjjjjjj. means for transmitting newly designed IC information, ~~including new IC testing information to evaluate the new IC that has been designed by the IC designing means,~~ to the manager through the

Art Unit: 2123

Internet, wherein the newly designed IC information that has been transmitted to the manager is added to the custom library designing information that is stored in the manager (figure 2, Internet connected to servers; and figure 3, and column 7, lines 35 - 45; and column 6, lines 44 - 48).

kkkkkkk. Haase appears to teach:

lllllll. including new IC testing information to evaluate the new IC that has been designed by the IC designing means (third and fourth pages, section 2.4 Verification, especially automatic verification and running full tests without any user interaction; and fourth page, figure 2, automatic self-checking verification);

mmmmmmm. Regarding claim 24:

nnnnnnn. Chen, Dole and Haase teach the limitations of claim 24 as described in claims 17 and 20 above: An IC designing system comprising the manager of claim 17 and the design terminal of claim 20.

oooooooo. Regarding claim 25:

ppppppp. Chen appears to teach:

qqqqqqq. An IC designing system for use in the IC designing method of claim 1 (figure 2).

10. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen as modified by Dole and Haase as applied to claims 1 - 14 and 17 - 25 above, further in view of Frank (U.S. Patent Number 6,782,511).

- a. The art of Chen as modified by Dole and Haase teaches a method for designing a new IC based on IC designing information transmitted from a manager, as recited in claims 1 - 14 and 17 - 25 above.
- b. The art of Frank is directed to a service provider for an electronic design automation tool (Title).
- c. The art of Frank and the art of Chen are analogous art because they both pertain to the art of electronic design automation tools.
- d. Regarding claim 15:
- e. Chen does not specifically teach:
 - f. wherein if the manager has found the user not belonging among the authorized users, then the step (a) includes the step of transmitting the at least part of the IC designing information, including the at least a portion of the custom library designing information, provided that the user pays an administrator of the manager and/or a designer of the custom library for the at least portion of the custom library designing information.
- g. Frank appears to teach:
 - h. wherein if the manager has found the user not belonging among the authorized users, then the step (a) includes the step of transmitting the at least part of the IC designing information, including the at least a portion of the custom library designing information, provided that the user pays an administrator of the manager and/or a designer of the custom library for the at least portion of the custom library designing information (figure 1, element 108 pay-per-use EDA tool, and element 118, subscriptions \$).
- i. The motivation to use the art of Frank with the art of Chen as modified by Dole and Haase would have been the benefit recited in Frank that the intellectual property created can be sold efficiently and easily (Abstract, last sentence), which would have been recognized by the ordinary artisan as a benefit to generate income.

j. Therefore, as discussed above, it would have been obvious to the ordinary artisan at the time of invention to use the art of Frank with the art of Chen as modified by Dole and Haase to produce the claimed invention.

k. Regarding claim 16:

l. Chen does not specifically teach:

m. wherein if the manager has found the user not belonging among the authorized users and if the user is allowed to design the new IC by using the custom library designing information included in the at least part of the IC designing information, the method further includes, after the step (c), the steps of: determining whether or not the new IC has been designed based on the custom library designing information; and if the new IC has been designed based on the custom library designing information, alerting the user to pay for the custom library designing information used.

n. Frank appears to teach:

o. wherein if the manager has found the user not belonging among the authorized users and if the user is allowed to design the new IC by using the custom library designing information included in the at least part of the IC designing information, the method further includes, after the step (c), the steps of: determining whether or not the new IC has been designed based on the custom library designing information; and if the new IC has been designed based on the custom library designing information, alerting the user to pay for the custom library designing information used (figure 1, element 108 pay-per-use EDA tool, and element 118, subscriptions \$).

11. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the Applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. The entire reference is considered to provide disclosure relating to the claimed invention.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure:

- a. Watanabe (U.S. Patent Number 6,157,947) teaches an IP server.
- b. Schneck (U.S. Patent Number 5,933,498) teaches controlled access to digital property and payment for access.
- c. Brown (U.S. Patent Application Publication 2002/0156757) teaches a network based EDA system.
- d. R. Saxby et al.; "Test in the emerging intellectual property business", 1999, IEEE Design and Test of Computers, Volume 16, Issue 1, pages 16 - 18; teaches including test vectors with intellectual property designs.

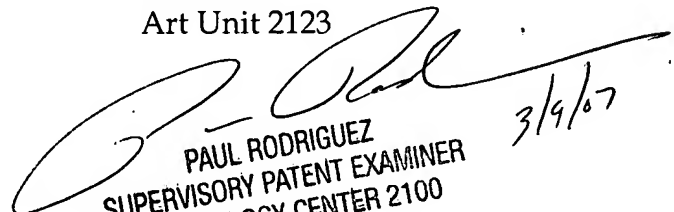
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russ Guill whose telephone number is 571-272-7955. The examiner can normally be reached on Monday - Friday 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RG

Russ Guill
Examiner
Art Unit 2123


PAUL RODRIGUEZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100
3/9/07